

Cowee,
1904

LIBRARY
NEW YORK
BOTANICAL
GARDEN

Catalogue
1904
OF
GROFF'S
NEW
Hybrid Gladioli

TOGETHER WITH OTHER VARIETIES
OF ACKNOWLEDGED MERIT.

ARTHUR COWEE

MEADOWVALE FARM, BERLIN, N.Y.

100000

Special Annual Catalogue



OF

GROFF'S NEW HYBRID

GLADIOLI

WINNERS OF SIXTEEN FIRST
AWARDS AT PAN-AMERICAN
EXPOSITION, BUFFALO, N. Y.
NINETEEN HUNDRED ONE

ALSO

OTHER VARIETIES OF DOMESTIC AND FOREIGN
ORIGIN OF ACKNOWLEDGED MERIT



Selected and
Grown by

ARTHUR COWEE

Meadowvale
Farm.

BERLIN, NEW YORK



INTRODUCTORY.



ITH the view of giving the amateur a decided advance in quality and value, all sales will be made from the following lists.

Comparison with the varieties, sections and strains, will convince experienced growers that the increase in value and quality is far in advance of the prices charged, and the discarding of older varieties and strains that have not stood the test of competition is in the interest of the grower, and save him the cost of selection. The World's Best Seedlings (Silver Trophy Strain) are the coming strain of commerce, and never fail to give satisfaction.

The New Hybrid Seedlings, having been disseminated by me for some years, are now the leading stock of commercial growers. This strain defeated the whole Childsi section, with all its reserve of introduced quality, at New York in August, 1900.

Selected, Dark, White, Light and Yellow; and Blue Hybrids, will be prepared in better value than ever.

The leading novelty of this list is Groff's Gold Medal Pan-American Exposition Collection, made up of the choice varieties exhibited at Buffalo in 1901. No such collection was ever offered before in the world, and cannot be obtained elsewhere. In its preparation expensive named varieties are used, without regard to their cost or value, and hundreds of new varieties practically unknown; such diversity, quality, and value, was never before offered in any list in commerce.

I cannot recommend too highly the "Silver Trophy Strains." A trial of them will convince one that there is no better value offered in the world at the price. It should be largely planted.

"Whatever success I have been permitted to achieve as the result of my labors, are gains to the world and to civilization; they are new creations, evolved from nothing; their original parents being simply weeds, in the eyes of the refined admirer of beautiful flowers. And like the product of the miner's toil, they are drafts upon the great treasure house of Nature, wronging and robbing no one; unlike the results of speculative competition, those mere exchanges of wealth too often be-sprinkled with tears of the widow and the orphan, or even the successes of legitimate commerce, seldom attained without grinding competition, involving the very life-blood of struggling man."

H. H. GROFF, before Provincial Association.

* * * * *

BUFFALO, Sept. 25th, 1901.

"I have been an interested observer of the work of Mr. Groff during the past ten years, and it is particularly worthy of commendation. His display of hybrid Gladioli at Buffalo is wonderful, and it is safe to say that the *named varieties* of five years ago sink into insignificance when placed alongside of his seedlings. Mr. Groff's Gladiolus exhibit is worth a visit to the Pan-American. It is at once an object lesson and an inspiration."

—PROF. JOHN CRAIG.

* * * * *

Cornell University, Ithaca, N. Y.

(Extract from personal letter from Superintendent William Scott, Department of Floriculture Pan-American Exposition.)

"And so ends the wonderful exhibit of Gladiolus which you have made for us at the Pan-American Exposition. To say that your display has been a great attraction for the past two months does not begin to express what your display really has been. It has been the star feature of our horticultural exhibits, and from the expressions that I have heard from hundreds of visitors it has been one of the greatest attractions of the whole Exposition."

—WILLIAM SCOTT.

* * * * *

From Luther Burbank, to Mr. H. H. Groff:

"I have watched your progress with the Gladioli, especially at the Pan-American, etc., and am delighted you have made such a glorious success of it. With the many discouragements of Plant Originators there is plenty of silver lining sooner or later."

SANTA ROSA, CAL., Jan. 2, 1902.

PAN-AMERICAN EXPOSITION
BUFFALO·NEW YORK·A.D.1901



The Directors, on the recommendation of the Superior Jury,

A GOOD MEDAL

Am. Academus —

卷之三

Director General
May 1947
Academy of Accords



三



THE GLADIOLUS.

A search, be it ever so painstaking and complete, of the floral kingdom, will discover no flower of such easy culture, embracing the great range of color with endless combinations and variety, to equal the Gladiolus. Although called the people's flower, it to-day is practically unknown to both the amateur and average grower, and I claim for the newer hybrids greater beauty and more exquisite coloring than in any other garden ornament. Even the orchids failed to equal it, excepting in durability as a cut flower, and here the Gladiolus excels all others.

For the best results, cut the spike when the first flower opens and bloom in the house. This treatment is also beneficial to the bulb.

Varieties of the Gladiolus are now numbered by thousands, but comparatively few possess sufficient vitality to reproduce characteristic flowers; the same may be said of self-fertilized seedlings. This makes my selected collections of special value and advantage to the buyer, and not afforded by any other grower. The process of selection also assures the best possible results in the hybridized seedlings listed herein.

In this catalogue is presented to the progressive amateur, as well as the scientist, the most valuable varieties, collections and mixtures offered in the world. They are selected with the view of giving the critical grower unequalled value and satisfaction.

The only bulbs, blooming size, sent out are first quality old, and strong bulblet grown. The latter are the best value and produce the finest flowers this season and next. These and smaller sizes are kept for my own growing, in preference to the largest matured corms. No second size or cull old bulbs are sent out at any price—they never give satisfaction.

The brief cultural instructions condensed herein are sufficient for general use. Special conditions of soil and climate should be made the subject of correspondence.

Extract from Florist Exchange, Sept. 20th:

"We now understand that crossing is good for the species; because it constantly re-vitalizes offspring with the strongest traits of the parents, and ever presents new combinations. But crossing alone can accomplish comparatively little, the chief power in the progression of plants is selection; the force which augments, develops and fixes types, and we must constantly select the best, in order to make any advancement."

—BAILEY.

* * * * *

"You will expect me to speak to you to-night of that borderland of mystery, where man is permitted to join hands with the Great Creator of the Universe in guiding those forces of which he knows so little; until the highest flights of human fancy, picturing seeming impossibility, in exquisite beauty and never ending variation in form and color, sink into comparative insignificance, as the veil is slowly lifted before our expectant and wondering gaze."

H. H. GROFF, before Waterloo Horticultural Society,
and Provincial Association of Fruit Growers.

* * * * *

"Varieties improved from man's point of view must receive kind treatment and richer food than wild forms of the same plant. The cultivated plant, like the domesticated animal, yields in a measure its powers of self-defense to adapt itself to our service. Man must in return provide for its safety and nourishment. In the improvement of plants the action of man, much like influences which act on plants in the wild state, only brings about slow and gradual changes, often scarcely noticeable at first. But if the first efforts toward the desired end be kept on steadily, the changes will soon become greater and greater, and the last stages of the improvement will become much more rapid than the first one."

—VILMORIN.

* * * * *

"We are now standing just at the gateway of scientific horticulture—only have been a few steps in the measureless fields, which will stretch out as we advance into the golden sunshine of a more complete knowledge of the forces which are to unfold all the graceful forms of garden beauty and wealth of fruits and flowers."

—BURBANK.

* * * * *

"An occasional and slight change in the conditions of life is beneficial to all plants and animals; but the offspring from a cross between organisms which have been exposed to different conditions profit in an incomparably higher degree than do young or old beings from a mere change of their conditions."

—DARWIN.

1904—NOVELTY—1904

WORLD'S FAIR COLLECTION OF GROFF'S NEW AND RARE GLADIOLI.

This new collection is prepared from high-class novelties of recent production, and a few meritorious named varieties of late European introduction. It contains only a few hundred varieties specially selected from the cream of high quality and is prepared to meet the demand for a limited number of extra choice types rather than a collection of great range in variety like the Pan-American Exposition Collection which contains over ten thousand varieties.

The shades of red, scarlet, crimson, cerise, yellow, blue and light colors are of the highest order and the purest quality. The flowers are of exceptional size and beauty.

Price per 100, \$25.00. 25 at 100 rate.

Groff's Extra Select Pan-American Exposition Collection— The Gold Medal Collection.

This collection is made up from the choice, new varieties exhibited at Buffalo in 1901, and contains varieties of such high proven quality that no grower, however critical, can wish for better value.

In its preparation, over 600 named varieties have been discarded, and every desirable section known is represented—Gandavensis, Lemoine, Nanceianus, Blues, and New Hybrids.

In this collection the Whites, Lights, and Yellow shades are of the purest colors obtainable, relieved in many varieties by stains and blotches of most intense and decided contrast.

The Pinks, Reds, Scarlets, Crimsons, and Cerise shades are of the highest quality, with flowers of the largest size and greatest perfection.

The New Blues, including tints of Lilac, Heliotrope, and Clematis, were never before offered in mixture.

The flowers are of the largest size in their respective types, the spikes of correct form, with plants of exceptional vigor and vitality.

This new collection is the best and latest products of years of costly effort and the result of scientific hybridization from the most valuable material the world has known. It is prepared specially with the view of providing the amateur with a typical collection of the Modern Gladiolus. No such was ever before offered, and no better value can be desired.

Offered in lots of 25, 50, 75 or 100 corms, or upwards. Every collection separately prepared. So great is the diversity of this excellent collection that the purchasers of 1,000 corms will get few duplicates.

Price per 100, \$15.00. 25 at 100 rate.

"Although it is well known that selection is the great force in improvement, too many professional growers are content with selecting, the seed parent only; and the credit they would like to take for this care and enterprise would make them the subjects of ridicule with those who are improving by selection all useful forms in the animal kingdom."

H. H. GROFF, before Waterloo Horticultural Society
and Provincial Association of Fruit Growers.

* * * * *

"Limitations once thought to be real have proved to be only apparent barriers; and as in many of the dark problems of nature, the mental light of many ardent, persevering, faithful workers will make the old paths clear, and boundless new ones will appear by which the life-forces are guided into endless, useful, and beautiful forms."

—BURBANK.

* * * * *

"As civilization progresses higher and higher, the human taste for beauty and fine arts improves more and more, and I believe that the time may come when the world of beauty will entirely fall into the hands of those who are exponents of Nature."

—HENRY IZAWA.

* * * * *

In the opinion of experts on the matter of hybridizing the Gladiolus, Mr. Groff, of Simcoe, Canada, stands foremost in the world at this work."

WAIKATO ARGUS, New Zealand.

* * * * *

"Sunset Magazine," San Francisco, June, 1902.

"Mr. Groff is the leading American specialist in the Gladiolus."

PROF. WICKSON, University of California, on Luther Burbank.

* * * * *

All of my Gladiolus disappointed me the past season, as the hot wave struck them at the end of June. They had just pushed out their flower spikes, and were all so badly scorched by the hot sun, that none showed up well. Several of yours came out later, and under the adverse condition must say they were fine indeed. I will want more bulbs next spring, so please mail me your catalogue as soon as it is published.

ILLINOIS.

HENRY C. ECKERT.

* * * * *

On the Blues and Lights I cannot report, as they were in bloom while I was at the Pan-American. The Reds planted ten days earlier, gave me some fine colors, the equal of anything that has come to me from the Continental lists.

VERMONT.

D. C. HICKS.

THE SILVER TROPHY STRAIN.

GROFF'S "WORLD'S BEST" NEW HYBRID SEEDLINGS.

1—NEWEST REDS, SCARLETS, AND CRIMSONS. The world's commercial strains, offer few equal and none better (they should be largely planted).

Per 100, - - - - - \$3.00.

2—NEW WHITE, LIGHT, AND YELLOW. All shades of white, cream, and yellow, in many combinations, relieved by stains and blotches of rich colors in most pleasing contrasts.

Per 100, - - - - - \$4.00.

3—RARE BLUES, IN CLEMATIS, LILAC, AND HELIOTROPE SHADES. New Hybrids of Papilio Major, practically unknown. No such seedlings offered elsewhere in the world.

Per 100, - - - - - \$5.00.

Large blooming bulbs, the only size offered. Possible variation in colors as above classified, due to out-crosses, will be covered by extra count in filling orders.

25 at 100 rate.



GROFF'S SPECIAL SELECTIONS.

These special selected collections of New Hybrids are prepared from the cream of the world's named introductions, in Gandavensis, Lemoine and Nanceianus after discarding over 600 named varieties, and some also include choice new tested seedlings of equal or greater merit.

1—SELECTED NEW DARK HYBRIDS. All shades and combinations of red, scarlet, and crimson, of highest quality.

Per 100, - - - - - \$12.00

2—SELECTED NEW WHITE, LIGHT, AND YELLOW HYBRIDS. No equal value offered elsewhere or otherwise obtainable.

Per 100, - - - - - \$15.00

3—SELECTED NEW BLUE HYBRIDS. Not offered elsewhere in the world (no smoky or slate blues).

Per 100, - - - - - \$18.00.

Large blooming bulbs, the only size offered.

25 at 100 rate.

*Extract from the Florist Exchange (an unquestioned authority) of issue
Sept. 20th, 1902.*

The Meadowvale Farm of Arthur Cowee, of Gladiolus fame, is situate in the hamlet of Berlin, N. Y.; and, although somewhat removed from regular roads of travel, the Gladiolus industry is an attraction that brings many flower lovers to Berlin during the plant's flowering season.

It was our privilege on the first of September to ramble over the fields, and note the Gladioli in their many different hues; and, although it was perhaps a week or ten days too late for the fields to be viewed at their best, the sight presented was well worth the journey.

As is well known, the varieties of Gladiolus grown here are principally those now known to the trade as Groff's Hybrids. When we entered the field it was our intention to note and try to describe some of the newer creations; but the varieties are so multitudinous, and of such excellent merit generally, that they can only be referred to in sections; and we can now easily appreciate Mr. Groff's system of refraining from naming his varieties. There are so many that would be worthy of a name, should that system be adopted, that it would be impossible to find appellations for them all.

Before entering further into the subject, we ought to say that Mr. Cowee is a life-long enthusiast on Gladiolus, and for the past ten years he has been growing them extensively. Now, ten years' cultivation and close observation of any one particular flower must necessarily give one a fair understanding of the subject in hand, and although all the new European varieties are grown and tested carefully, as well as the several well-known American strains, Mr. Cowee does not hesitate to say that Groff's Hybrids lead all others. To some that may seem a very broad statement, as there are now several other beautiful types of Gladiolus that are well-known commercially; but if we look closely into the matter we must admit that Mr. Cowee is justified in his opinion. Let us take diversity of color, for instance. There was one block of a light-colored section—probably about two acres. We cut fifty spikes indiscriminately from the ends of the rows nearest the path. When these fifty spikes were closely examined it was found that there was only one duplicate among them. All were light colored in the strictest sense of the word; and, excepting one, they were all dissimilar. In that block there were at least 500 different varieties. So much for color variation.

With respect to constitutional vigor, this is perhaps their very strongest point. When seen growing in close proximity to other strains, Groff's Hybrids all flower, and every bud will open and fully develop. It is also very noticeable that the very small bulblets, or cormels, of these hybrids have a propensity for flowering while very young; of one block of such cormels that, when planted, were from $\frac{3}{8}$ to $\frac{5}{8}$ of an inch in diameter, 90% had flowered.

CONCLUDED ON PAGE 14.

GROFF'S HYBRID SEEDLINGS.

THE MOST POPULAR STRAIN IN AMERICA.

The original introductions of Mr. Groff awarded certificate of merit by Society of American Florists, New York, 1900, where they defeated the whole Childsi section exhibited in competition by the introducer.

Also certificate of merit at Buffalo, 1901, and at Asheville, S. C., 1902.

In this section I control over 75% more of the varieties comprising this strain than any other grower, in fact the whole of this important introduction is in my hands including every variety offered by all other growers.

Large Blooming Bulbs, price per 100	- - - - -	\$ 2.50
Large Blooming Bulbs, price per 1,000	- - - - -	15.00
Small Bulbs, $\frac{3}{8}$ to $\frac{5}{8}$ -in. diameter per 100	- - - - -	.75
Small Bulbs, $\frac{3}{8}$ to $\frac{5}{8}$ -in. diameter per 1,000	- - - - -	6.00



COWEE'S SPECIAL COLLECTIONS AND MIXTURES.

COWEE'S MIDWAY COLLECTION.

This collection is specially prepared as an intermediate or midway section between the new Gold and Silver Trophy strains of Pan-American celebrity, and those of a popular character following, all in high types of commercial value.

It is prepared from all sections in new named varieties of European origin which until the introduction of Groff's Gold and Silver Trophy strains at Buffalo have led the world, also a few of the earlier introduction of Groff Hybrids. It will be found of exceptional value, quality and diversity.

Price per 100,	- - - - -	\$5.00
25 at 100 rate.	- - - - -	



COWEE'S "BUFFALO" MIXTURE.

This is a strain composed entirely of selected named varieties, Mr. Burbank's California Select. Mr. Gray's Ingleside Hybrids and named Childsi.

Price per 100,	- - - - -	\$3.00
25 at 100 rate.	- - - - -	

Another feature that points towards exceptional vigor is the freedom with which the plants produce their cormels; with no other varieties, as grown here, can there be so rapid an increase from parent stock.

It has been remarked that the Gladiolus is most useful as a cut flower, and that is, or should be, its proper sphere. That the demand for it as a cut flower is increasing each year is a fact, though city florists have ideas to the contrary. It must be remembered that while city florists are enjoying their dull season, the Summer resorts are in full swing and the Gladiolus is in the height of its beauty. It is from the latter places that the chief demand comes, and until there is some flower grown that can be had cheaper and will last longer the Gladiolus will reign supreme and the demand for it will increase year by year.

To accommodate the immense number of corms through the Winter season large storehouses are necessary. Mr. Cowee has two of these houses on the farm, each 96 x 27 feet, and two stories high, piped for heating, and lighted with electricity.

Besides lighting the establishment with electricity, Mr. Cowee has his residence fully lighted (some 27 lamps are in use) by this illuminant.

There is also a saw-mill where the boards for all his crates are sawn from logs.

His brother, W. J. Cowee, has here several machines making wired tooth-picks, and the power is derived from a small stream of water which flows from the reservoir built for irrigation purposes. Incidentally, there has been no need for irrigating the Gladiolus fields this year.

Before concluding, we must remark that Meadowvale Farm is an ideal place to spend a Summer's day. The beauty of the Gladiolus fields, and the genial hospitality of Mr. and Mrs. Cowee make the visit one to be long remembered.



The Groff's Hybrids I had of you last spring gave the best results of any bulbs I have yet used. The flowers were beautiful; the finest Gladioli I have ever seen. I will want some more next spring. Send me a catalogue.

NEW YORK.

FRANK C. HERRICK.



I wish to tell you that it has never been my privilege to see Gladioli in all my experience like those grown from bulbs you sent me last spring. They were extremely large and handsome in form and color.

MASSACHUSETTS, Nov. 23d, 1903. REV. J. A. L_____.



I have just finished taking up my bulbs and wish to say that the Groff's Hybrid Seedlings gave entire satisfaction and made a fine display, please send me your catalogue as soon as published.

ILLINOIS, Nov. 7th, 1903.

H. H. G_____.



FROM SILVER TROPHY STRAIN, SECTION ONE.



FROM SILVER TROPHY STRAIN, SECTION TWO.



FROM SILVER TROPHY STRAIN, SECTION THREE.



SCENE IN ONE OF THE MEADOWVALE FIELDS.

COWEE'S "NIAGARA" STRAIN.

This mixture is prepared for the use of those who need large quantities at reasonable prices.

It contains named white, light, yellow and variegated types of American Hybrids, and named Childsi. It is sure to give satisfaction.

Price per 100, - - - - - - - - - - - - - - - - - - \$2.50
25 at 100 rate.



MISCELLANEOUS SORTS.

	Per 1000
Mixed Childsi per hundred, \$1.75.....	\$15 00
Burbank's California Select per hundred, \$3.00.....	25 00
Smoky and Slaty Hybrids per hundred, \$2.00.....	15 00
Meadowvale Mixture, 1st size.....	10 00
Meadowvale Mixture, 2nd size.....	7 50
White and light shades.....	12 00
Pink Shades.....	10 00
Scarlet and Red Shades.....	7 00
Orange and Yellow.....	25 00
Striped and Variegated.....	18 00
Extra Fine Mixed Lemoine.....	15 00
Fine Mixed Lemoine.....	10 00

25 at 100 rate.

250 at 1,000 rate.



NAMED GANDAVENSIS AND OTHERS.

	Per 100	Per 1000
Augusta	\$6 00	\$50 00
Brencheleyensis	75	6 00
Canary Bird	8 00	
Ceres	1 00	8 00
Eugene Scribe	5 00	
Fatma	3 50	
Isaac Buchanan	2 50	22 00
John Bull	2 00	16 00
"1900"	2 50	20 00
Madam Monneret	1 25	10 00
May	2 00	16 00
Shakespeare	5 00	40 00
Marie Lemoine	2 00	15 00

25 at 100 rate.

250 at 1,000 rate.

The brilliant coloring of Groff's first section of Gladioli was a great gain over existing hybrids. The seedlings sent me this season were very robust, and show a good advance over the first section. I was particularly interested in the blue and lilac shades.

NEW YORK.

R. R. STOCKDALE, Vice-Pres't.



Groff's Hybrid Gladioli were the finest we have ever had, in fact this year we had the finest Gladioli in this section. They were superb, having stems four to six feet in height, in gorgeous colors. I would like to secure some of the reds separate for mass effects for next season.

MAINE.

WILLIAM MILLER.



Mr. H—— has just given me your letter regarding the Gladiolus which I received from you through him. I can only say that they were far ahead of my anticipations, and I have never seen anything in the Gladiolus world that was as beautiful. They attracted much attention, and were the admiration of all who saw them.

MASSACHUSETTS.

FRANK H. DODGE.



The Groff's Hybrids you sent me last spring, proved to be all that you claimed for them. Notwithstanding the long and severe drouth we had here, the blooms were large and perfect, and the colors were fine.

Had we a favorable season, there is no doubt but what they would have done much better. Would also state that the "Meadowvale Mixture" sent at the same time, was the best I have ever bought in mixture, and I was both pleased with the bulbs, and your generous manner in filling my order, although a small one.

MINNESOTA.

E. J. FOBES.



The Gladioli are in bloom, and are a glorious rival to my sumptuous orchids. I need not add that they give me exquisite delight. I think them a wonderful creation, and in form and coloring, cannot be surpassed in Nature's realm. I cannot say enough to let you know how much pleasure I have gotten out of my investment. Now I only wonder what magnificent blooms I have failed to secure, because I did not buy more of them.

CONNECTICUT, Aug. 26th, 1902.

MRS. B. B. T——.

CULTURAL DIRECTIONS.

Plant in full exposure to the sun, in any well enriched garden soil, avoiding contact with manure, which should never be fresh. Where soil is stiff clay, fill the drill with sandy loam—water when necessary during the early stages of growth and again when buds show color. The bulbs may be planted in double rows, two inches apart in a four inch drill, two, three and four inches deep, according to size. Here we plant from the middle of April to the middle of May, and with all sections and sizes, bloom is continuous from the end of July until frost.

Before the ground freezes, dig up the bulbs, cut off the stalk close, and store in a cool, dry place. The old bulb, or more properly speaking, corm, may be removed a few weeks later when convenient. The process of acclimation of foreign varieties is not only an advantage to the grower on this continent but the beneficial effects of culture in our stimulating northern atmosphere will be more apparent when the bulbs are developed in the more genial and humid climates of our Southern and Middle States.

Those who fail to succeed with stock furnished by me will please report the same; and if due to any cause under my control, I shall be glad to make it good, as, before increasing the number of my correspondents, it is my wish to assure satisfaction and value to those who have favored me with their orders. Satisfaction is guaranteed as to quality of stock furnished. No guarantee other than that stock is true to name, is given as to results, these being practically under the control of the grower.



REGARDING GLADIOLUS SEED.

I have many applications during the season for Gladioli seed. This we do not sell for several reasons, the two principal ones of which are as follows:

First. The seed from which our new varieties are produced, is hand hybridized and grown by Mr. H. H. Groff, at Simcoe.

Second. The growing and flowering of bulbs from Gladioli seed is a delicate and tedious task, and there are few whose experience and patience would be proportionately rewarded by the results.

It is more satisfactory and economical to buy well established bulbs produced by scientific hybridizing with a thorough knowledge of the parent plants.

The Gladioli bulbs I purchased from you last Spring gave the best of satisfaction. They attracted the attention of every one who saw them, for their beauty of color and large spike. You certainly deserve credit for the production of such shades and spikes.

PENNSYLVANIA, Oct., 1902.

FRED H——, Florist.



The Gladioli bulbs purchased from you last Spring being planted so late, all have not yet bloomed. Enough bloomed, however, to win me first premium at our fair. The blue ones are very pretty. They are the only ones of the kind ever seen in our city. If I live, I am so well pleased, that I will buy from no one else next year.

OREGON, Sept. 29th, 1902.

MRS. J. V. T——.



As to the result of the planting of your Gladioli bulbs I will say, that they have far exceeded even our expectations in size, and in every way. They are perfectly beautiful, and have been much admired.

NEW YORK, Oct., 1902.

LORAIN N. D——.



The Gladioli bulbs, Niagara Strain sent by you have all bloomed. Some were very beautiful, and I would like to have more in the Spring. Others in our neighborhood will want bulbs, as mine were very much admired when in bloom. I had a great many planted, but none as fine as yours.

PENNSYLVANIA, Oct. 25th, 1902.

MRS. J. T. R——.



They were all fine (Groff's) far exceeding my expectations. At C—— I made two entries, took first and second premiums. At A—— I made one entry, took first premium there. The judges at A—— say they never saw such quality before. (Gold Medal Collection, and Gold Medal and Silver Trophy Strain). Nothing for me in the future but the best.

NEW YORK, Oct. 27th, 1902.

CHARLES L——.



The superb collection of Gladioli which you so kindly presented to me, reached here yesterday, and are in prime condition. I have spent every moment since trying to name, photograph, and record the color of as many specimens as possible. Some of them are known to us, but the magnificent blues and purples are entire strangers. How shall we name them? * * * * Thanking you most heartily for the handsomest collection of flowers I have ever seen at one time, I am

Very sincerely yours,

NEW YORK, N. Y., Aug. 20th, 1902.

A. S. VAN B——.

A FEW DON'TS.

DON'T think that in ordering a few bulbs you will compass a wide range of varieties, for we have over ten thousand. We do claim, however, that even in small quantities, you will secure a larger variety of high quality, than in any other stock offered at the same, and higher prices.

DON'T, whether you buy our stock or that of others, pick out the largest bulbs from a collection or mixture, and imagine you have the best quality, for by so doing, you may eliminate from your purchase, varieties of high quality which never produce large bulbs.

DON'T, if you have been led into paying high prices for medium and poor quality under high sounding names, fail to give our stock a trial order. Compare quality and prices, and select from the stock, and secure at small cost, if you wish, a collection of greater value than is possible under the obsolete naming system.

All stock herein offered, is subject to prior sale, and orders received are not binding until accepted in writing.

In filling orders, no substitutions will be made unless so instructed. Stock for greenhouse forcing can be shipped in the Autumn after the bulbs are thoroughly cured.

Special discount to seedsmen, or to those ordering in lots of ten thousand or more.

Our fields, which will be more extensive and beautiful this year than ever before, are near the railroad station and during the blooming season (July to October) I shall consider it a pleasure to receive and show visitors through them.

Parties contemplating a visit should advise me a day or two in advance.

ORDER EARLY.

Every season, orders reach us too late to be properly executed, on account of the required early planting of some very late flowering varieties.



DIRECTIONS FOR ORDERING.

CAREFULLY SIGN YOUR NAME, POST OFFICE, COUNTY AND STATE.

Remittances should accompany all orders from unknown purchasers, and may be made by post office order, express order, New York draft, or cash by registered letter. Postage stamps accepted as cash.

During the blooming season, usually between July 25th and frost time, I can furnish cut spikes of superior flowers in large or small quantities, and shall be pleased to quote prices upon application.

Address all orders to ARTHUR COWEE, Proprietor,
Meadowvale Farm, Berlin, N. Y.

— I can assure you they are one of the handsomest specimens which ever came to the Catskill Mountains, being admired by everybody, and you certainly deserve credit for your skill and art in producing these Gladioli. The different shades of color and the artistic designs upon them are beautiful. In looking at them, every minute you discover something different, and new in color. Only sorry to state that the pleasure to enjoy them was so short, as the season in the mountains this year was rather poor for flowers.

CATSKILL MOUNTAINS, Sept., 1902.

CHARLES Z.—

* * * * *

Doctor — is very much interested in Gladioli, having about one thousand varieties. He saw those from stock which you sent me last Spring, and he admitted they were the best and finest he ever saw, and wanted to know where I secured them. I wish you would send him one of your catalogues. I have taken so much satisfaction from those grown this season, that I will want quite a lot more, and will send in order early.

MICHIGAN, August 25th, 1902.

J. A. G.—

* * * * *

As regards the Midway Collection purchased from you last Spring, they have bloomed well, and the colors have been fine, and the size satisfactory. Another Spring I shall order more, as I like them better than any bulbs I have had before.

VERMONT, Sept., 1902.

MRS. JOEL H. G.—

* * * * *

I write to tell you of my beautiful blossoms. I have several of the coveted blues and heliotrope colors, a few dark red and several oddly marked. I am more than satisfied. I hope to purchase next Spring some of your higher priced bulbs.

NEW YORK, Aug. 24th, 1902.

MRS. L. N. B.—

* * * * *

Your Midway Collection as ordered by me in early Spring, proved all you claimed them to be, in fact they were the finest Gladioli I have ever had in my collection, and I shall take pleasure in recommending you to friends who desire bulbs of the higher order.

NEW YORK, Sept. 10th, 1902.

E. E. D.—

I have to report that we had a most favorable season for Gladioli blooms, and having them mulched with straw, I had some of the largest and best Gladioli I ever saw. In quality, the three strains (Gold Medal and Silver Trophy) I received from you two years ago, were the best.

Two bulbs of the first section (Dark shades) produced flower stems that were immense, nearly five feet high, and of such vigor, constitution, and sun-resisting qualities, that I kept them separate to breed up in future, a sun-proof strain.

ILLINOIS, Oct., 1902.

HENRY C. E_____.



While the corms were as you stated, small, they all bloomed. They were not only entirely new varieties to me, but also very beautiful. The individual blossoms on the stalks were large, and although the season being rainy and dark, was not favorable, still I had entirely satisfactory results.

NEW YORK, Sept., 1902.

L. D. C_____.



I am delighted with the Gladioli bulbs, Gold Medal and Silver Trophy Strain which I purchased of you in May. They blossomed finely the last of August, and were exquisitely beautiful, their rich tints rivalling orchids. The blossoms excited the admiration of all who saw them.

I was awarded a special prize for them at our County Fair.

NEW YORK, Oct., 1902.

IDA M. B_____.



The Gladioli I received from you were the finest I have ever seen, they grew so strong and increased wonderfully.

NEW YORK, Nov. 12th, 1903.

F. A. D_____.



It is a week to-day since I received your shipment of Gladioli (cut spikes.) Among the varieties you sent me I found many like those which I had, with the exception that some of mine did not bloom as large as yours. I thought they were the finest lot of Gladioli I had ever seen, but my wife thought that they were no finer than those that I had grown from the bulbs you sold me this year. Kindly mail me one of your catalogues this Fall.

NEW YORK, Sept. 8th, 1903.

J. J. A_____.



My stock all grew splendidly and when the flowers came I felt well repaid for the cost of the bulbs. No one in this vicinity had seen a blue Gladiolus, and my row of 100 blues attracted much attention. I am much obliged to you for supplying me with such fine stock of my favorite flower.

MASSACHUSETTS, Nov. 6th, 1903.

E. R. C_____, JR.

My Gladioli were a triumphant success and I want now to engage for next year bulbs from your Gold Medal Collection, sections two and three; also I want of your Special Selections.

PENNSYLVANIA, Sept. 23d, 1903. MISS M. L. D_____.

* * * * *

I have seen here this summer in a small garden belonging to my friend, Miss _____, the best and most varied collection of Gladioli I have ever seen. She said she secured the bulbs from you and I write to ask you to send me your catalogue.

LONG ISLAND, Sept. 26th, 1903. MR. W. H. P_____.

* * * * *

Gold Medal and Silver Trophy Strain section three now in full bloom; have given them the first row with eight rows of Gandavensis, Lemoine, Childsi and Nanceianus back of them, the colors of the others only helping to set off the marvelous beauty and colorings of your Strain. They are all you claim for them.

WISCONSIN, Aug. 14th, 1903. MR. A. L_____.

* * * * *

Last year I saw your exhibit of Gladioli at the Wethersfield Grange Fair. I cannot find words that will fairly describe my appreciation of the most beautiful and rare display of blossoms. This spring I had a longing for some bulbs which would produce such flowers as you displayed, but in the absence of your catalogue (which I misplaced) I turned to one which I had containing Childsi varieties with long names and longer and alluring descriptions of the wonderful markings and colors of the bloom. I could hardly wait for the first blooms, which opened in time but were a great disappointment, but they were better than I had had before. I believe that the bulbs which you offer will give me greater satisfaction and would be pleased to have your catalogue for next season.

CONNECTICUT, Oct. 5th, 1903. MR. A. M_____.

* * * * *

The Gladiolus Spikes were received and added greatly to our display. My display of Groff's was the most admired of anything at the show. I made two entries and took first and second premiums.

NEW YORK, Aug. 13th, 1903. MR. C. L_____.

* * * * *

I have flowered my Gladioli which I purchased of you and would say, they were very satisfactory; by far the best I have ever grown.

MASSACHUSETTS, Sept. 28th, 1903. EDWARD I. L_____.



THE GROWER, MR. ARTHUR COWEE.



LOOKING ACROSS THE SOUTH HALF OF MEADOWVALE FARM TOWARD THE VILLAGE OF BERLIN, N. Y., WHICH IS SITUATED ON THE CHATHAM DIVISION OF THE RUTLAND RAILROAD ABOUT 160 MILES DUE NORTH OF NEW YORK.

The Gladiolus bulbs I received from you this spring were the finest I ever saw and I have seen a great many. Yours cannot be beaten, they are the finest in America; everybody has admired them and people passing my garden say they never saw such fine varieties, and I thank you for sending me such a fine collection. I will give you another order for next year.

NEW YORK, Sept. 21st, 1903.

MR. K. H. K_____.



The Gladioli you sent me last spring have given the greatest satisfaction. The blue ones have been admired by every one who saw them. (Buffalo Mixture, Groff's Hybrids and Midway Collection).

CONNECTICUT, Sept. 22d, 1903.

MR. S. L. G_____.



* * * * * They were perfectly satisfactory, I enjoyed each one. Though I had some fine ones before, the Buffalo Mixture far surpassed them.

WISCONSIN, Sept. 29th, 1903.

MRS. R. F. S_____.



The small order of Gladioli purchased from you last spring proved satisfactory. I shall want \$25, \$50 or \$75 worth of stock.

UTAH, Sept. 9th, 1903.

MR. JOHN A. E_____.



Please be so kind as to send me one of your catalogues. Lately I have seen Mrs. _____ collection of Gladioli she obtained of you, and they were most beautiful. I could hardly believe Gladioli could be so superb. Mrs. _____ is a member of our State Floral Society. Thanking you in advance for the catalogue.

CALIFORNIA, Sept. 25th, 1903.

MISS H. C_____.



The Gladioli, Gold Medal and Silver Trophy Strain, were very much admired by all who saw them. I hope to send for more of other varieties another spring.

NEW YORK, Sept. 13th, 1903.

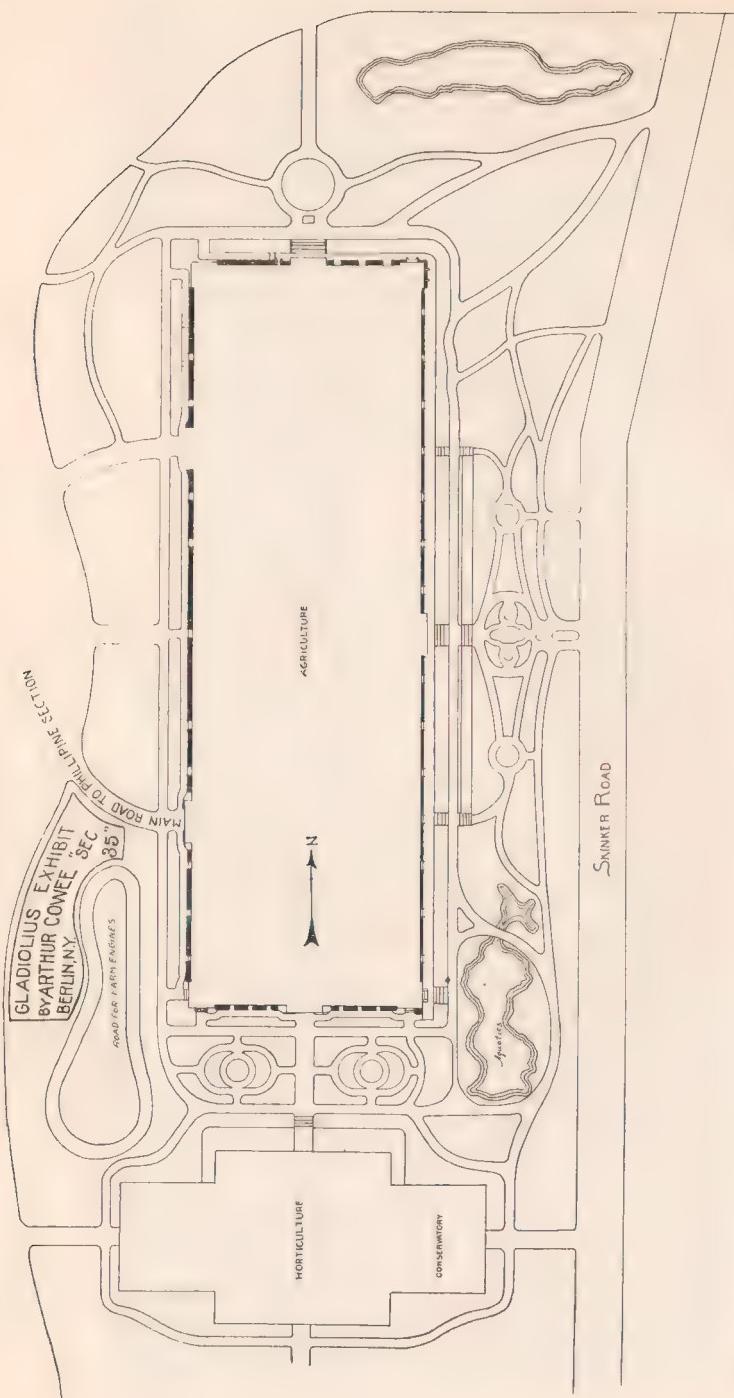
MRS. H. W. C_____.



Some months since you sent me a package of your Gladioli. They have been, and part now are in bloom and are indeed remarkably fine. There are a few of extraordinary beauty and elegance of color. As I wrote you I have been a grower of Gladioli for many years and have had many fine flowers, but yours are far superior.

INDIANA, Aug. 24th, 1903.

J. P. B_____.



MAP OF AGRICULTURE AND HORTICULTURE BUILDINGS AND SURROUNDINGS, LOUISIANA PURCHASE EXPOSITION,
ST. LOUIS, MO., 1904, SHOWING LOCATION OF GLADIOLUS EXHIBIT BY ARTHUR COWEE,
MEADOWVALE FARM, BERLIN, N. Y.

BREEDING FROM "TAME" VERSUS "WILD" SPECIES.

From my earliest interest in plant breeding I have been impressed with what seemed to be the axiom of all hybridist, *i. e.* the theory of breeding back to the species "wild," as one of the greatest errors and obstacles to advancement in the line of improvement and progress, and during the recent International Conference of Plant Breeders held in New York this idea seemed to pervade the whole situation to such an extent that the error called forth my strong protest early in our first meeting at that time.

The unlimited scope of this question makes it impossible for me to deal with it fully in this paper, and my present object is to voice a warning to plant breeders in order that valuable time may not be lost by them in permitting limitations to be placed upon their activity, and the wheels of progress thereby delayed.

Before I abandoned my effort in improving the Canna, I secured ample proof of the correctness of the view to which I am giving expression, and Dr. Van Fleet's report at the Conference referred to, showed that only one type of merit rewarded the many years of his labor on the gladiolus—in breeding from the "wild" species.

While conducting my experiments on these and all lines I kept in mind the influence of cross-breeding on all hybrid types, both plant and animal, and found the lessons presented by the human family to be the most valuable and comprehensive—although here the crosses were by no means of a scientific character, yet the enormous multiplication of such examples, and I may say of errors, afforded a vast field for profitable investigation.

Few animal breeders have made the mistake of plant breeders, and those who did go back to the earliest obtainable types in hope of material improvement on lines of utility and value, secured the usual large crop of weeds as the result. The most noted and successful animal breeders are those who have developed sires by the most careful selection of parentage, and by the most distant removal from the "wild" species, and I am convinced that were these removals increased by many thousands, the satisfactory results would be increased in even greater ratio than have been evinced in those preceding.

The so-called Mendelian theory is largely responsible for the limitations referred to in the activity of plant breeders, giving them the idea that definite and duplicate types can be created by certain crosses, and, while this is apparently so in the offspring of limited pedigree, it is completely lost in the more advanced and valuable types containing a larger number of crosses, and where plant breeders do make crosses by the tens of thousands, using the most advanced specific types of domestic production as sires as would be done by animal breeders—the Mendelian theory is soon forgotten, for in plant and animal breeding from "wild" species this theory is only the one and one make two, and two and two make four stage, of what must be built up from thousands of units, before a fraction of the possibilities of the improvement we aim to achieve can be realized. It, however, is of value as an illustration of the composition of the simple hybrid form with its latent and patent elements, and one of the great objects of plant breeders must be to keep many of these elements as latent as possible.

To refer again to my own specialty, the gladiolus, in the modern creations of which we have the most advanced examples in hybridity in plants, assuming that my contention is tenable as to this flower having been subjected to the greatest number of crosses, we are given an object lesson on the lines of my objections to the practice of going back at all at this stage of our progress to the "wild" species for revitalization, my object being to keep as far away from them as possible.

European originators have always acted on the former theory with the result that their productions are bred to type, and the specific parentage of their hybrids is apparent to a marked degree carrying with them not only the original peculiarities of weak stems and plants, but also the lack of adaptability to changed conditions of soil and climate which we must expect to find in all "wild" species, and which we now know to be the product of environment with its coercing limitations as to habitat.

On the other hand I have been able to produce under the system of breeding from "tame" species of my own originating plants from six to eight feet high with proportionate vigor and vitality carrying flowers of equal proportions, these being the great incentive on account of their beauty and economic value, and although carrying the specific markings of their wild parents yet with every original color purified or intensified, and with every objectionable characteristic eliminated, or, as Mendell would say, rendered latent. Many of these modern types stand nearly six feet to the top of the foliage before the flower spike appears and which adds fully two feet more to the plant at maturity, while those bred closely to the "wild" species average $2\frac{1}{2}$ to $3\frac{1}{2}$ feet to the top of the matured flower spike.

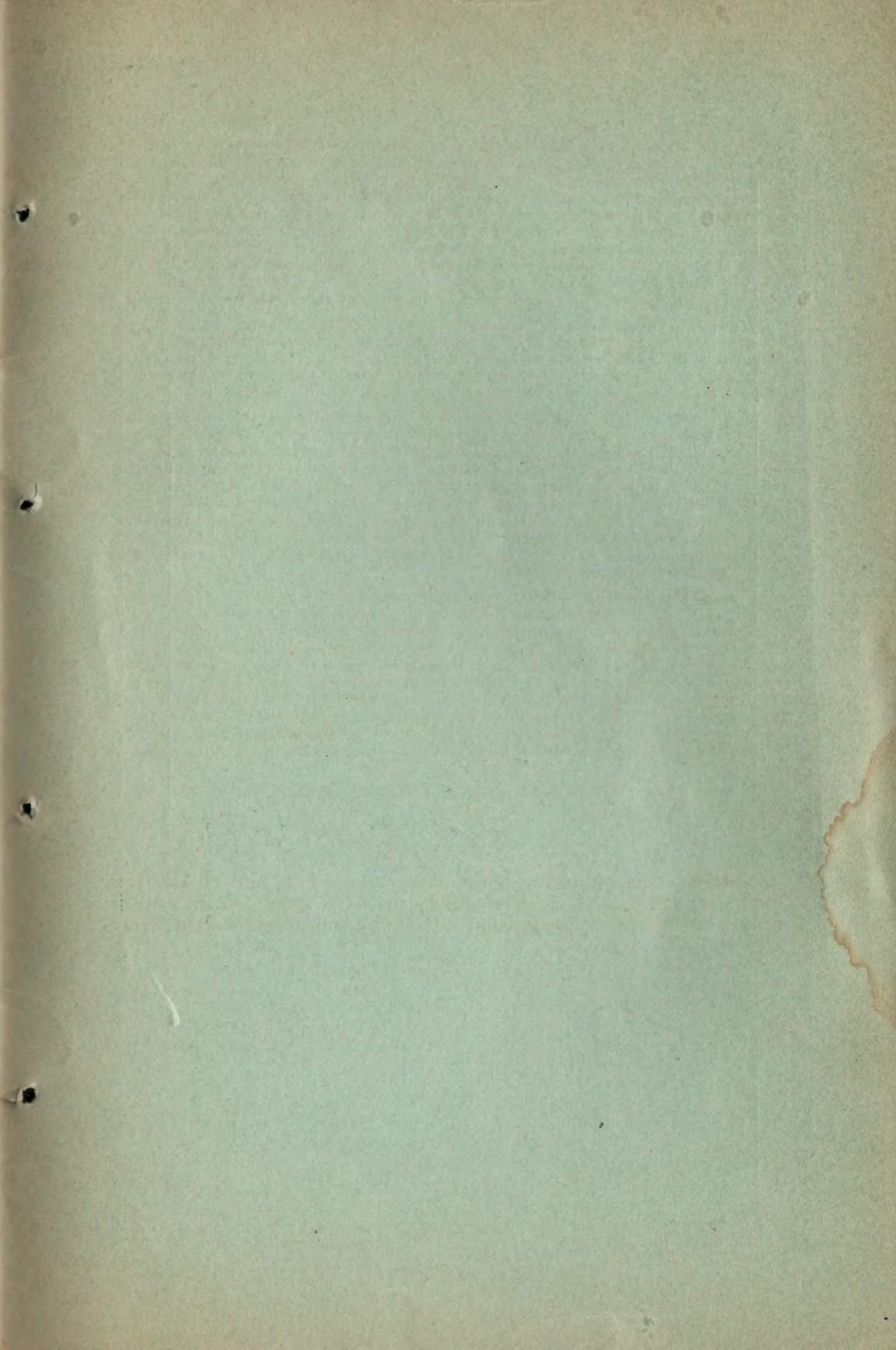
While I might multiply illustrations with many valuable lessons on every point of interest to plant breeders, as it is to these that this paper is addressed, I will bring the point forcibly home to them by two examples. Would we expect to see the intelligent horse breeder of to-day go back for sires to the many toed type of the miocene period were this possible, or even to existing "wild" species?

It was my privilege recently to admire a picture illustrating with artistic skill a most advanced human type of physical and intellectual beauty, a female form of such exceeding loveliness and perfection as to hold the gazer spellbound by its revelation of divine quality, while the portrayal of intellectual development and purity was so forceful and compelling, as to grasp the very soul and lift it from its earthly surroundings to a position of silent and inexpressible admiration and reverence. This picture was entitled "An Heiress of the Ages." Would we expect her to advance to greater triumphs of perfection and beauty by an alliance with some of the semi-anthropoid types of early human development, or even with well known "wild" species of the present day?

I leave these comparisons to your consideration. Therefore, the only value "wild" species are to the plant breeder is for the foundation of new races of hybrids—and much will depend upon the judgment of the hybridist as to what line he selects for the improvement of each. After many removals from these original parents, assuming that the said lines have been wisely chosen, valuable specific types of high quality and great vitality and productiveness will appear. These in their turn may be blended with suitable types produced from other wild species, with the promise of endless progression in size, quality and beauty and the production of "tame" species immediately available as revitalizers for degenerating strains, as well as the progenitors of new, useful and beautiful forms beyond the power of human comprehension.

Presented at the "Plant and Animal Breeders Convention," held at St. Louis on 29th to 30th December, 1903, by H. H. Groff.

NOTE—The Photo-Engravings on pages 15, 16 and 17 are from Photographs taken at Meadowvale Farm, by *Country Life in America*, and are reproduced by permission of the publishers, Messrs. Doubleday, Page & Co.



PRIZES AWARDED TO GROFF'S NEW HYBRID GLADIOLI

BUFFALO, N. Y., 1901

Pan-American Exposition Gold Medal.

Pan-American Silver Vase, awarded by Buffalo
Florists' Club.

Certificate of Merit, by Society of American
Florists and Ornamental Horticulturists.

Thirteen First Prizes by Pan-American Exposition.



A TOTAL OF
SIXTEEN FIRST AWARDS